

ENDANGERED SPECIES

Technical Bulletin

Department of Interior, U.S. Fish and Wildlife Service
Endangered Species Program, Washington, D.C. 20240

Senate Hearings Held on Reauthorization Bill

Testimony on S.2309, a U.S. Senate bill to reauthorize and further amend the Endangered Species Act of 1973, was given on April 19 and 22, 1982, before the Environmental Pollution Subcommittee, Committee on Environment and Public Works. The hearings were another step toward extension of the Act, which expires September 30, 1982.

The bill to reauthorize Endangered Species Act appropriations for 3 years was introduced on March 30, 1982, by subcommittee chairman Senator John H. Chafee (R-RI) on behalf of himself, Senator Slade Gorton (R-WA), and Senator George J. Mitchell (D-ME). "Based upon a recognition of the interdependent nature of man and his environment," Senator Chafee said, "the 1973 Act is crucial to the future well-being of mankind." Senator Chafee opened the hearings on the bill with a statement that it is intended to "maintain the integrity of the Endangered Species Act" while offering legislative solutions to several matters of concern voiced at the December 8 and 10, 1981, oversight hearings.

One issue addressed in S.2309 is the "experimental population" concept. As defined in the bill, the term would apply to any population of a listed species that is released, for approved conservation purposes, outside the species' current range, provided that the experimental population is wholly separate geographically from nonexperimental populations. Under the amendment, an experimental population deemed necessary for conservation of a species would be treated as a Threatened population, which would allow for increased management flexibility. Experimental populations determined not essential would be treated as populations proposed for listing (except for experimental populations occurring on national wildlife ref-

uges). No Critical Habitat would be designated for nonessential populations.

Among the changes that would occur in the listing process is a requirement concerning action on petitions to add a species to, or remove it from, the U.S. List of Endangered and Threatened Wildlife and Plants. If the petition is judged to contain substantial scientific information, a decision on whether or not to proceed with the action would have to be published within one year of receipt of the petition. Procedures on implementation of Section 4, including priority systems designed to rank species for listing and recovery actions, would also be published in the *Federal Register*.

The Federal share of Section 6 State cooperative agreement program costs would be increased from 66 2/3 percent to 75 percent, and from 75 to 90 percent when two or more States have joint endangered species projects. These formulas would bring endangered species grant cost-sharing ratios into alignment with other Federal programs to aid fish and wildlife restoration. Under S.2309, endangered species funding assistance to the States could be appropriated up to \$6 million for each of Fiscal Years 1983, 1984, and 1985.

A number of amendments would be made in Section 7 of the Act under the Senate bill. Among the changes would be a streamlining of the exemption process. The initial review board would be abolished, and its function would be transferred to the Secretary of the Interior (or Commerce, as appropriate), who would make the threshold decisions and prepare the reports to the Endangered Species Committee (ESC). The new process would allow 20 days for the threshold decision, 150 days for the report, and 30 days for the ESC decision,

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Texas Orchid Listed as Endangered

By E. LaVerne Smith

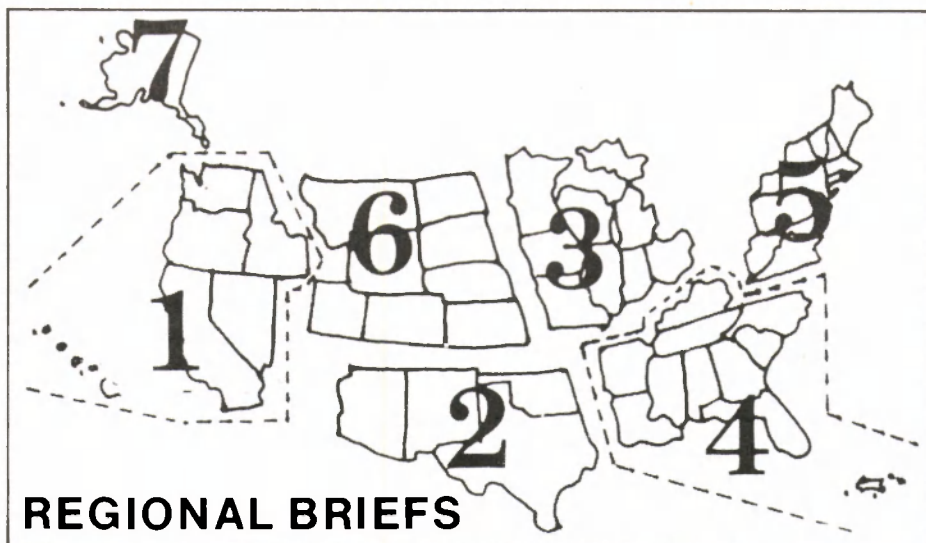
Spiranthes parksii (Navasota ladies-tresses) was determined Endangered on May 6, 1982, and will now receive protection under the Endangered Species Act. Critical Habitat for this orchid was not determined because of the threat of overcollection.

Fewer than 20 individuals of the plant are known to exist today in two populations within Brazos County, Texas. One population occurs near College Station, where urbanization is increasing. The second is on a ranch where the primary use of the land is hunting. Both sites are privately owned and neither population was under protective status. Due to its rarity and the widespread interest in orchid cultivation, this species may also be sought by collectors. The extremely small total population sizes make *Spiranthes parksii* highly vulnerable to extinction.

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Spiranthes parksii, an extremely rare orchid, was listed as Endangered this month.



REGIONAL BRIEFS

Endangered Species Program regional staffers have reported the following activities for the month of April:

Region 1—The Service's Pacific Islands Area Office in Honolulu, Hawaii,

will conduct a forest bird survey for the Mariana Islands (Rota, Tinian, and Saipan) from March 8 to June 14, 1982. The survey team includes John Engbring, Supervisory Biologist, and his team members, Celestino Aguon, Phillip

Ashman, and Peter Pyle. Guam will be used as a base of operations for the survey. On Saipan a training session will be conducted on survey methodology and forest bird identification for the Department of Natural Resources staff. On Ponape the census methodology will be tested for cover/terrain characteristics of that island. Throughout the trip, Engbring will be meeting with government officials and acting in a liaison capacity. The survey has been scheduled to coincide with the most favorable weather conditions and the period of most active nesting for forest birds. At other seasons of the year, heavy rains and/or typhoons might be encountered, or birds may be considerably less active and thus overlooked on the survey.

Recently, a Canadian investment firm acquired 19,000 acres of undeveloped land in the Coachella Valley, California. The area, which includes a majority of the Critical Habitat for the Threatened Coachella Valley fringe-toed lizard (*Uma inornata*), represents the largest contiguous parcel ever assembled in the Coachella Valley. Although no official development plans have been announced, indications are that the firm anticipates providing facilities for the fast growing computer industry. It is not clear at this time how much of the area will be developed, and therefore the potential impacts to the lizard are largely unknown. It may be possible to work out agreements with the developers for protection of the lizard while plans are still in the formulation stage.

Copies of the approved Southern Sea Otter Recovery Plan are available from the Fish and Wildlife Reference Service, Unit 1, 3840 York Street, Denver, Colorado 80205 (800/525-3426), at a cost of 10¢ per page, 70 pages. The plan outlines a program to recover the southern sea otter (*Enhydra lutris nereis*) to the non-threatened status by establishing one or more additional colonies within the otter's range. Prior to translocation, however, several studies are necessary.

The plan outlines additional monitoring activities, and suggests several ways to reduce the threat of oil spills. Upgrading of law enforcement and public education activities are also recognized as very important to the recovery effort.

Region 2—Another 250,000 razor-back suckers (*Xyrauchen texanus*) have been stocked in the Salt River, Arizona, bringing the year's total to about 700,000.

This summer's personnel and equipment for the Kemp's Ridley sea turtle (*Lepidochelys kempii*) nesting beach project at Rancho Nuevo, Mexico, are assembled in Texas but, as of May 3, the necessary permit from the Departamento de Tesca had not been received.

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U.S. Fish and Wildlife Regions

Region 1: California, Hawaii, Idaho, Nevada, Oregon, Washington, and Pacific Trust Territories. **Region 2:** Arizona, New Mexico, Oklahoma, and Texas. **Region 3:** Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. **Region 4:** Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, and the Virgin Islands. **Region 5:** Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia. **Region 6:** Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. **Region 7:** Alaska.

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No conservation actions can be undertaken without this permit. The region anticipates that the permit will be issued in early May.

The leopard darter (*Percina pantherina*) listing and Critical Habitat designation was upheld by the U.S. Court of Appeals for the 10th District. In an opinion issued April 12, the Federal listing was affirmed and the litigation was dismissed for lack of standing on the part of the plaintiffs, the Glover River Organization.

Region 3—The final draft of the Gray Bat Recovery Plan has gone to the Director for approval; the technical review draft of the Northern States Bald Eagle Recovery Plan and the agency review draft of the Higgins' Eye Pearly Mussel Recovery Plan are both out for comment.

A bald eagle (*Haliaeetus leucocephalus*) pair is nesting this spring in Missouri, which is the first confirmed nesting in that State since the early 1960's. A protective zone has been established around the nest tree. Further information will appear in future issues of the BULLETIN.

Region 4—The commissioners of the Florida Game and Fresh Water Fish Commission have recently voted to prohibit the artificial feeding of the Endangered Key deer (*Odocoileus virginianus clavium*). This proposed regulation will prohibit such activities by the public as the actual feeding of deer, the attempt to feed, and the enticement of deer with food. The State anticipates that this regulation will become effective in early June.

Four status surveys have been approved for animals and plants in the Atlanta Region. The Denver Wildlife Research Center Field Station in Belle Chasse, Louisiana, will study the Louisiana and black pine snakes (*Pituophis melanoleucus ruthveni* and *P. m.*

lodingi, respectively) and the gopher tortoise (*Gopherus polyphemus*) where its range overlaps that of the snakes. Pine snakes, like the Threatened eastern indigo snake, (*Drymarchon coris couperi*) are often associated with gopher tortoise burrows. Another status survey covers four Florida sand scrub plants: *Lupinus aridorum*, *Lupinus westianus*, *Dicerandra cornutissima*, and *Dicerandra frutescens*. The other two surveys deal with the Tar River spiny mussel (*Canthyria* sp.) and the Puerto Rican sharp-shinned hawk (*Accipiter striatus venator*).

The large and as-yet-unexplained die-off of manatees (*Trichechus manatus*) in the Ft. Myers area of Florida has continued. The die-off started in February and, as of May 1, there had been at least 37 dead manatees reported from the general vicinity of the Caloosahatchie River outlet. Investigations by the National Fish and Wildlife Laboratory in Gainesville, Florida, have not confirmed the reasons for the mortalities, but red tide organisms are suspected. Necropsies show that the manatees have ingested tunicates, commonly known as "sea squirts," which are known to filter out and hold the red tide toxins.

Region 5—Peregrine falcons (*Falco peregrinus*) have returned to the Franconia Notch area of New Hampshire where they successfully nested last year. At least four other pairs are on eggs or have young in New Jersey. Several other pairs are also known in the area from Chesapeake Bay northward.

Bald eagle chicks produced at the Patuxent Wildlife Research Center have been successfully introduced into nests in New Jersey and New York.

Region 6—In the summer of 1981, western South Dakota and western Kansas were used as test areas where

posters, newspaper articles, radio and television announcements, and local contacts were used to attempt stimulating reports of black-footed ferrets (*Mustela nigripes*). Fifteen sightings were reported in South Dakota and eleven in Kansas. Although no ferrets were located, about 25 percent of the observations were determined to be "probable" sightings of black-footed ferrets. This work will continue in the summer of 1982.

Recent studies by Jim Enderson, Colorado College; Jerry Craig, Colorado Division of Wildlife; and Bill Burnham and Dan Berger, Peregrine Fund (Fort Collins, Colorado) have shown that the eggshells of American peregrine falcon (*Falco peregrinus anatum*) eggs laid in the wild in Colorado in 1981 were encouragingly thicker than those laid from 1973 to 1980. The wet weight content of DDE (a metabolite of DDT) in peregrine eggs in 1980 averaged 13 parts per million (ppm), a large drop from the 20 ppm found in egg contents through 1979. A major part of the DDE being picked up by peregrines is probably obtained from migrant insectivorous prey the falcons eat. Collections and analyses of 29 prey species of birds available to peregrines show that migrants often contained well above 1.0 ppm DDE, a level of contamination which has been shown in other studies to be sufficient to produce the degree of shell-thinning observed in Colorado peregrines. Since DDT is banned from use in the U.S., it is believed that the migrant prey species are picking up the DDT in the winter when they are south of the U.S. This belief is backed by the fact that some other raptors which do not feed on migrant insectivores, such as the bald eagle (*Haliaeetus leucocephalus*), have made a stronger comeback than peregrines since DDT was banned.

The final report on the White River Fishes Study was submitted to the Bureau of Land Management by the Service's Colorado River Fisheries Study Team. Habitat in the White River (Utah) does not appear suitable for bonytail chubs (*Gila elegans*), humpback chubs (*Gila cypha*), or razorback suckers (*Xyrauchen texanus*). No razorback suckers or bonytails were collected during the study, and only one suspected humpback was collected. However, a number of Colorado squawfish (*Ptychocheilus lucius*) were captured and substantial data were obtained on squawfish. One of the more interesting findings was a 382-mile movement in 5 months by a radio-equipped Colorado squawfish. Part of the mileage involved a 129-mile swim downriver and a subsequent return. This information, plus data gained from other radio-equipped and tagged squawfish showed that



Photo by W. H. Julian

New regulations will prohibit the artificial feeding of the Endangered Key deer.

Texas Orchid Listed

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Background

Spiranthes parksii was first collected by H.B. Parks along the Navasota River in 1945. D.S. Correll described the species in 1947, based upon the Parks collection. Subsequent efforts to relocate the species in the late 1940's and 1950's were unsuccessful, and it was thought to have become extinct. Fortunately, however, P.M. Catling rediscovered the species in Brazos County near College Station in 1978. Recent searches have resulted in rediscovery of a second population near the type locality.

Spiranthes parksii is a small herbaceous perennial orchid which measures approximately 30 cm tall. Most of the leaves are basal and grass-like. The flowering stalk is slender, bearing spirally arranged, small, white flowers with a green mid-vein. This orchid occurs in post oak woodlands. *Spiranthes parksii* is one of the rarest and least known orchids of North America.

Legislative and Regulatory History

Actions leading to Federal protection for this orchid began in 1973 with the inclusion of plants in the Endangered Species Act. Section 12 of the 1973 Act directed the Smithsonian Institution to compile a report on Endangered, Threatened, and extinct species. The resulting 1975 report included *Spiranthes parksii*; it was treated as a petition by the U.S. Fish and Wildlife Service, and published as a notice of review on July 1, 1975. This action was followed on June 16, 1976, by a proposal to list a number of plants, including *Spiranthes parksii*. Due to subsequent requirements of the 1978 Amendments to the Act, the 1976 proposal was withdrawn. *Spiranthes parksii* was repropoed on June 18, 1980, based on sufficient new

information. After complying with Executive Order 12291 and the Paperwork Reduction Act, which require that the potential economic effects of a rule-making be considered, the Endangered determination was published. Critical Habitat was not determined due to the possibility of further jeopardizing the species.

Protection Under the Act

This rare orchid will now receive the protection of the Endangered Species Act of 1973, as amended, as it applies to plants. Regulations detailing the general prohibitions and exceptions applying to Endangered plants are found at 50 CFR Section 17.61. These prohibitions, in part, make it illegal to import export transport, or offer for sale in interstate commerce specimens of *Spiranthes parksii*. Taking of Endangered and Threatened plants is not prohibited under the Act, and private landowners are not affected.

Section 7 of the Act provides for inter-agency consultation, and requires Federal agencies to evaluate the affects of their actions on listed species. No Federally authorized, funded, or permitted actions are known to be jeopardizing the existence of *Spiranthes parksii*. The U.S. Army Corps of Engineers has determined that the Millican Reservoir project will not affect this orchid.

Recovery actions are now required under the Act for this species. Through volunteer conservation agreements or other methods, the Service hopes to negotiate further protection for the two sites occupied by *Spiranthes parksii*. Species biology research, propagation research, proper habitat management, and educational programs are a few of the activities which a recovery plan for this species might address.

Mariculture Operation Exemption Again Sought

The U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) have received a petition seeking an exemption for captive-bred green sea turtle (*Chelonia mydas*) products from the existing prohibition in commerce in the species (F.R. 4/1/82). It was filed on January 22, 1982, by the Pacific Legal Foundation and the Association for Rational Environmental Alternatives on behalf of the Cayman Turtle Farms.

Background

The green sea turtle was listed for protection under the Endangered Species Act of 1973, as amended, on July 28, 1978. No exemption for mariculture operations was provided in the final regulation which became effective on September 6, 1978. On August 15, 1978, Cayman, which is engaged in the captive breeding of the species, requested that the mariculture issue be reviewed, and that the regulations be stayed while the decision was being reconsidered. FWS and NMFS agreed to review any new evidence applicable to the regulation, but refused to grant the stay of regulations.

Cayman filed suit in the U.S. District Court for the District of Columbia on September 5, 1978, challenging the agencies' decision. In a Decision Memorandum issued on December 5, 1978, FWS and NMFS restated their rejection of the mariculture operation. The decision was judicially upheld in 1979, in *Cayman Turtle Farm v. Andrus*, 478 F. supp. 125 (D.C. Cir. 1979), *aff'd men.*, No. 79-2031 (D.C. Cir. December 12, 1980).

The petitioners are proposing implementation of the exemption by means of a permit provision similar to that proposed by FWS and NMFS in 1975. (See 40 FR 21977, 21985, 1975). Current regulations governing the species are found in 50 CFR Part 17 and Parts 222 and 227 (1980).

REGIONAL BRIEFS

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some are migratory while others are sedentary. This difference in behavior may be due to sexual maturity, with sexually mature individuals making long distance spawning migrations.

A Memorandum of Understanding was signed with the National Park Service, Yellowstone National Park, for the protection and management of *Agrostis rossiae* (Ross bentgrass). Yellowstone National Park contains the only known

population of *Agrostis rossiae* in the world.

A management agreement has also been consummated with the U.S. Forest Service for *Astragalus montii* (Heliotrope milk-vetch), a rare Utah plant that is only known to occur on the Wasatch Plateau in Sanpete County, Utah. (See the February 1981 BULLETIN for more information.)

Region 7—The revised draft of the preliminary Alaska Peregrine Falcon Recovery Plan and the final revised Aleutian Canada Goose Recovery Plan

have been submitted to the Director for approval.

The 1982 field season began April 16 when the first returning peregrine falcon was sighted. Migration studies being undertaken this spring and fall will determine the presence of a coastal migration route in the Yakutat area of the Gulf of Alaska. If a major migration route for peregrines or other raptors is found, the feasibility of establishing a trapping and banding station will be examined. Service biologists Phil Schempf, Ted Swen, and volunteer Pete Dunn are conducting the migration study.

CITES News— April 1982

The Endangered Species Act of 1973, as amended in 1979, designates the Secretary of the Interior as both the Management Authority and the Scientific Authority of the United States, for the purposes of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Management Authority responsibilities are delegated to the Associate Director—Federal Assistance; Scientific Authority responsibilities are delegated to the Associate Director—Research.

The Service's Wildlife Permit Office (WPO) functions as staff to the U.S.

Management Authority for CITES, assuring that wildlife and plants are exported or imported in compliance with laws for their protection and issuing permits for legal trade of these species. The Service's Office of the Scientific Authority (OSA) functions as staff to the U.S. Scientific Authority for CITES. OSA reviews applications to export and import species protected under CITES, reviews the status of wild animals and plants impacted by trade, makes certain findings concerning housing and care of protected specimens, and advises on trade controls.

New Guidelines for Export of Appendix II Species

In the first of a series of notices concerning the export of certain Appendix II species, the Service requested current status data and comments on new guidelines to be used in making export findings for the 1982-83 season (F.R. 4/5/82). Species involved are bobcat (*Lynx rufus*), lynx (*Lynx canadensis*), river otter (*Lutra canadensis*), Alaskan gray wolf (*Canis lupus*), Alaskan brown bear (*Ursus arctos*), American alligator (*Alligator mississippiensis*), and American ginseng (*Panax quinquefolius*).

Comments on the preliminary notice were received until May 7, 1982; the Service plans to publish proposed findings and a proposed rule on the guidelines later in May 1982, and again seek public comment. By late August 1982, the Service plans to publish final findings and a final rule, effective upon date of publication.

Background

The U.S. District Court for the District of Columbia ruled on December 15, 1981, that the criteria used by the Scientific Authority in advising on whether export of bobcat would not be detrimental to the survival of the species did not incorporate the guidelines called for by the Court of Appeals, which required that findings for bobcat export be based on "reliable estimates of the bobcat population and data showing the total number of bobcats to be killed, in each State involved." The new guidelines are proposed to comply with the Court's criteria.

In order to avoid complicating the process, the Service intends to use the same general guidelines for the lynx, river otter, and American alligator, as for the bobcat. Recognizing that the new guidelines may not be feasible for each species, the Service invites comments on how best to take differences in biology and management considerations of each species into account. The

new guidelines necessarily apply only to bobcat export, because of the court ruling.

The newly proposed guidelines describe acceptable methodologies for making population estimates and how the Service will assess reliability. The guidelines make clear that a reliable population estimate is a prerequisite to finding that export will not be detrimental to the survival of the species. They also describe considerations underlying allowable kill levels and make the determination of such levels a requirement for a no detriment finding.

The Alaskan populations of gray wolf and brown bear were listed on Appendix II only to control trade in species whose appearance either as a whole specimen, as parts (skins, etc.), closely resemble that of other endangered or potentially threatened species or populations. Accordingly, the Service will consider the impact of trade in these species or the effectiveness of CITES in controlling trade in other related species of populations when determining conditions under which export may be allowed.

The Service intends to use the same general criteria as were used last year in determining if exports of American ginseng will be detrimental to the survival of the species. A great increase in exports of American ginseng seed in the past year suggests that State management efforts should focus on seeds as well as roots in the interest of conserving this species.

Evidence of legal taking of bobcats, lynx, river otter, Alaskan gray wolf, Alaskan brown bear, and American alligator which is required by the Management Authority, is provided by State tagging systems. The use of self-locking, permanent tags marked to specify State, year of take, species, and a serial number will again be required for the 1982-83 season. States that were previously allowed to use other types of tags must this year use tags of the type specified by the Service.

CITES Plants Reviewed

The Service has announced the preliminary results of its review of North American plants included on Appendices I and II of CITES (F.R. 4/2/82). Public comment on the review is invited, and all statements received by August 31, 1982, will be considered in determining whether the Service should submit proposals to the CITES Secretariat for circulation to the Parties.

At last year's CITES conference at New Delhi, India, the Parties resolved to conduct a 10-year review of the appendices, and a notice initiating Service participation in this process was published on June 30, 1981 (see the July 1981 BULLETIN). The review is being conducted in coordination with the Canadian Wildlife Service (CWS) and the Mexican Department of Agriculture and Hydraulic Resources (MDAHR). Both biological and trade information on CITES species native to North America (and the islands under U.S. jurisdiction) was solicited. Comments were received from Federal and State agencies and from a number of interest groups.

The Service has proposed to recommend transfer from Appendix II to Appendix I, 21 taxa (species, subspecies, and varieties) of native U.S. cacti listed as Endangered or Threatened under the Endangered Species Act of 1973. In addition, the Service proposed the same action for 51 candidate taxa of cacti on the grounds that they appear to be actually or potentially threatened with extinction by commercial trade.

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Back Issues of Bulletin Available

Back issues of the *Endangered Species Technical Bulletin* are available from the Fish and Wildlife Reference Service in Denver, Colorado. This service is an agency of the Denver Public Library and is funded by the U.S. Fish and Wildlife Service, Division of Federal Aid. Available "hard copy" issues will be sent free of charge upon request for as long as the supply lasts. A set of back issues (July 1976 November/December 1980) is available on microfiche for \$2.00. Please state clearly which "hard copy" issues (month and year) you wish to receive and/or send money for microfiche copy to Fish and Wildlife Reference Service, Unit 1, 3840 York Street, Denver, Colorado 80205 (800/525-3426).

SENATE HEARINGS

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for a total of 200 days compared to the current 360. There are no provisions for extensions of these deadlines. The ESC also would determine whether an irreversible or irretrievable commitment of resources was made by the exemption applicant.

In response to considerable concern voiced at the December hearings, the consultation amendments would exempt actions carried out by a Federal agency under a "no jeopardy" biological opinion from the taking prohibitions of Section 9. Another change in Section 7 would be a requirement that the permit or license applicant would be included in any agreement to an extension of time necessary for preparation of a biological opinion.

Issues arising out of the implementation of CITES and the litigation on export of bobcat skins were addressed in S.2309. The Secretary would determine

ally fits these criteria, Arnett expressed support for the subcommittee's approach and recommended some clarifying language.

Among Interior's requests were that a number of points relating to the experimental population concept be more closely defined. Other recommendations were that the listing process be further clarified. One area of confusion, in particular, is how the bill's deadlines on consideration of petitioned species would affect the Fish and Wildlife Service's existing priority system. Another question was whether a species can be listed if its Critical Habitat is not determinable at the time of listing but could be determined in the future. With regard to status reviews, Arnett cited their value as a tool in making initial determinations on proposals to list species, and he recommended that they continue to be required as part of the listing process. Arnett also suggested that the scientific standard for "no detriment" findings under implementation of CITES be worded as the "best available biological

tion, testified for the Department of Commerce. Although Commerce continues to recommend the bill it proposed (S. 2310), which would extend the Endangered Species Act for 2 years without amendments, Stevenson offered a number of comments on S.2309. Again, the proposed definition of experimental population was cited for clarification. Further, Commerce opposes amendments to the listing process that it believes would give the Secretary of the Interior the authority to rewrite protective regulations promulgated by the Secretary of Commerce. Stevenson also advised that requiring Critical Habitat designations to be concurrent with listings may cause undue delays in the rulemakings, although status reviews were recommended as a mandatory early step in the process. The proposed requirement to conduct reviews of species on the lists of "professional scientific organizations," as well as those of State and foreign governments, was seen as another possible source of delay, and Commerce asked that information from such entities be considered advisory only. Other language in S.2309 was mentioned as needing clarification, particularly the amendment outlining schedules for various steps in the listing process. Commerce also would oppose any deletion of authority to list foreign species.

NOAA objects to the proposed amendment in the consultation process that would require the permission of any license or permit applicant for an extension of a biological opinion deadline. On another matter relating to Section 7 of the Act, NOAA believes that Federal agencies receiving "no jeopardy" opinions should remain subject to the taking prohibitions of Section 9.

Speaking for the Department of State was David A. Colson, Assistant Legal Advisor for Oceans, International Environmental and Scientific Affairs. "The United States is a leader in international conservation efforts," he said, and he called for reauthorization of the Endangered Species Act without amendments that would detract from that leadership role or from U.S. international treaty obligations. Colson stated that S.2309 is generally consistent with these criteria, but he recommended several changes. The State Department strongly supports the proposed addition to Section 4 "which: 1) provides for notification, in so far as practical, in cooperation with the Department of State, of regulations relating to listing of species of foreign nations: a) to those nations in which

"The United States is a leader in international conservation efforts," . . .

and advise whether the export or import of any Appendix II species will not be detrimental to the species' survival and whether export should be limited. The language specifically states that the Secretary "shall not be required to use estimations of population size . . . when such estimates are not the best available biological information derived from reliable wildlife management practices." In addition, the International Convention Advisory Commission (ICAC) would be abolished under the bill.

Federal Testimony

G. Ray Arnett, Assistant Secretary for Fish and Wildlife and Parks, represented the Department of the Interior at the April 19 hearing. He began his testimony by restating Interior's position that "the Act should be extended for one year with any amendments limited to modifications which would streamline the Section 7 exemption process and address problems identified by the States." After saying that S.2309 gener-

ally fits these criteria, Arnett expressed support for the subcommittee's approach and recommended some clarifying language. Among Interior's requests were that a number of points relating to the experimental population concept be more closely defined. Other recommendations were that the listing process be further clarified. One area of confusion, in particular, is how the bill's deadlines on consideration of petitioned species would affect the Fish and Wildlife Service's existing priority system. Another question was whether a species can be listed if its Critical Habitat is not determinable at the time of listing but could be determined in the future. With regard to status reviews, Arnett cited their value as a tool in making initial determinations on proposals to list species, and he recommended that they continue to be required as part of the listing process. Arnett also suggested that the scientific standard for "no detriment" findings under implementation of CITES be worded as the "best available biological information utilized in professionally accepted wildlife management practices." Interior believes that this language would be more specific, and would help avoid challenges in the courts. On the subject of funding for cooperative State endangered species programs, the Administration generally opposes this type of grant-in-aid approach. The Fish and Wildlife Service is not requesting Section 6 funds in Fiscal Year 1983. Another area of consideration was the Section 7 exemption process schedule. While endorsing the subcommittee's goal of streamlining the 360-day system, Interior suggested an alternative that would give the Secretary more time to prepare the ESC report while still reducing the entire process to 210 days. It was also recommended that the decision on whether an irreversible or irretrievable commitment of resources had been made should be retained at the threshold level.

William H. Stevenson, Deputy Assistant Administrator for Fisheries, National Oceanic and Atmospheric Administra-

species are believed to occur or b) to those nations whose citizens harvest the species on the high seas; and 2) would invite comments from such nations." Colson further recommended retention of "the requirement that the Secretary of the Interior, in determining whether a foreign species or one found on the high seas is endangered or threatened, shall cooperate with the Secretary of State in consulting with, or taking into account the efforts, if any, of a foreign country to protect that species."

State suggested alternate language for the scientific standard in "no detriment" findings, substituting "professionally accepted" for the word "reliable." It believes that retaining the independent authority of the Secretary of the Interior to act as the U.S. Scientific Authority for CITES, while making it clear that the Secretary is not confined to any one specific method in arriving at "no detriment" determinations, is consistent with CITES obligations. Colson did suggest clarification of several technical points concerning the proposed amendment to Section 8 of the Act. Further, he again came out strongly against proposals, not included in S.2309, which would require the U.S. to automatically take a reservation to CITES if a domestic species is added to Appendices I or II notwithstanding U.S. opposition. Although the Department of State is not opposed to reservations *per se*, Colson said an automatic legislative requirement "is inappropriate and inflexible and does not further our interests from a practical perspective."

State Wildlife Agency Concerns

The testimony of the International Association of Fish and Wildlife Agencies was presented by William S. Huey, Secretary of the New Mexico Department of Natural Resources. Most of his comments on S.2309 centered on Section 8 of the Act and CITES implementation. With regard to the scientific standard for "no detriment" findings, the association believes that using the word "reliable" to modify "wildlife management practices" would introduce another element of uncertain interpretation, leading to further litigation, and clarification of this point was recommended. The Association also suggested that language be added to make the amendment retroactive to the 1981-82 fur harvest. Another recommendation was that 5-year reviews are adequate and should be substituted for the annual reviews now required. The abolition of ICAC was

endorsed, and the Association advocated an amendment on CITES implementation "to direct that the United States take a reservation in situations where the Conference of the Parties undertakes improper listings of native species."

On the subject of listing, the Association suggested clarifying the standard of information necessary at each step of the process in order to maintain the integrity of the list. Any erosion of the current requirement to determine Critical Habitat would be opposed. The experimental population concept was seen as a step in the right direction, but the Association recommends giving the Secre-

Expediting the Listing Process

Strong interest in further expediting the listing process was voiced at the tary more discretion on management levels for different species in order to accommodate local interests. One possibility Huey presented would be for the

that economic considerations are confined strictly to the Section 7 exemption process." In separate testimony, The Nature Conservancy, the National Wildlife Federation, and a number of other conservation associations also advocated further steps to help speed the listing process by making biological data the deciding factor.

Other interests also spoke for a less cumbersome listing process. The Edison Electric Institute, an association of electric utility companies, said: "We have long advocated that any decision to list or delist a species must be made expeditiously in fairness to all those whose activities will be affected directly by the decision."

CITES Implementation

The proposed amendments to Section 8 of the Act in S.2309 were of great interest to private organizations as well as government agencies. Testimony presented on behalf of the American

"A statute is remarkably successful in finding the proper balance...if it protects species without stopping projects of economic importance."

Secretary to develop a cooperative agreement with the appropriate State wildlife agency for each experimental population.

"Making use of State resources through Section 6 of the Act is good sense" according to the Association, and Huey endorsed restoration of State grant-in-aid funding and the revised cost-sharing formulas. Private organizations such as the National Wildlife Federation, Safari Club International, and The Nature Conservancy also expressed strong support for State endangered species grants.

hearings on S.2309. Michael Bean of the Environmental Defense Fund, representing more than a dozen other conservation groups, presented a detailed critique of the proposed listing amendments, and called for a revision "to require that determinations of the status of species are based strictly upon objective, biological data and to insure

Fur Resources Institute, Fur Takers of America, and National Trappers Association concurred with the earlier recommendations to remove the word "reliable" from the scientific standard for no detriment determinations, to make such determinations every 5 years, to make the amendments retroactive to the 1981-82 trapping season, and to eliminate ICAC. The Wildlife Management Institute generally shared the trappers' views on ICAC and the no detriment language, but added a recommendation for a legislative requirement to take a reservation when species not protected under the Act are placed on the CITES appendices.

Testimony presenting a different view of the Section 8 controversy, especially as it relates to bobcat exports, was presented at the hearings on behalf of the Humane Society of the United States, Defenders of Wildlife, National Parks and Conservation Association, and So-

ciety for Animal Protective Legislation. These groups maintained that the existing language in Section 8 for determinations of "no detriment" is appropriate and necessary to conserve species on the CITES appendices, and they oppose any significant change in the current standard.

Section 7 Consultations and Exemptions

Speaking with Bean for the same group of conservation organizations, Kenneth Berlin of the National Audubon Society testified that the existing Section 7 consultation system has worked exceedingly well, but that a widespread misunderstanding of the process has unfairly exaggerated its impact on development. After describing a number of specific controversial cases, he concluded that "a statute is remarkably successful in finding the proper balance between economic growth and environmental protection if it protects species without stopping projects of economic importance. Section 7 of the Endangered Species Act has succeeded in achieving this fine balance." A streamlining of the exemption process schedule was endorsed, but the substitution of an administrative law judge for the Review Board at the threshold level was recommended rather than giving this responsibility to the Secretary. In another detailed analysis of the consultation amendments, the National Wildlife Federation also supported this alternate approach, which is intended to keep political considerations out of the initial exemption process. Additionally, these groups generally opposed the amendment giving the license or permit applicant "veto power" over extensions in the consultation period.

A number of those testifying at the hearings voiced concern about the amendment in S.2309 that would exempt actions carried under a "no jeopardy" biological opinion from the taking prohibitions of the Act. While endorsing the general goal of this amendment, some felt it is unacceptably broad and would not adequately limit avoidable taking of individuals. A spokesman for the National Wildlife Federation recommended that such exemptions "should be qualified to require that the best economically and technologically practicable techniques be utilized to limit reasonably avoidable take."

Foreign Species

Safari Club International recommended that the experimental popula-

tion concept in S.2309 "be expanded to apply to foreign populations of endangered and threatened species and the efforts by foreign nations to introduce or reintroduce such species outside their current range." The group proposed a number of other amendments, including ones that would allow importation of trophies legally taken in their country of origin, delete references to sport hunting as being a factor in the overutilization of species, clarify the current language describing commercial activity, and recognize "the valuable conservation effects of sport hunting."

Two multilateral treaties are implemented by the Act, CITES and the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere. The latter treaty is designed to conserve natural areas, wildlife, and plants, and has been ratified by 17 countries. The Environmental Defense Fund called for improved U.S. implementation of this treaty, particularly with regard to plants and migratory birds.

Protection for Plants

A provision to strengthen protection under the Act for listed plants was recommended by the Natural Resources Defense Council. Citing the current lack of taking prohibitions for plants, the inadequate control over plants on Federal lands, and the growing interest of collectors in rare species, the Council requested "amendments that would prohibit collecting of listed plant species for the purpose of possessing them and require Federal land-managing agencies to regulate the collecting of plant species for which there is a large demand that threatens to cause their extinction."

Private Industry Concerns

The Western Regional Council, American Mining Conference, Edison Electric Institute, and National Forest Products Association testified at the hearings on behalf of private industry and the business community. One issue of concern was the experimental population concept. The subcommittee was urged to more closely define certain terms, and to add language further restricting habitat conservation requirements for these experimental populations, while allowing experimental techniques to be used on existing nonexperimental populations. Critical Habitat was another category recommended for further clarification. Concerning Section 7 of the Act, most of those testifying supported the ideas of giving applicants more of a

NOAA Studies Possible Humpback Whale Sanctuary

The establishment of a marine sanctuary for the humpback whale (*Megaptera novaeangliae*) in Hawaiian waters is being studied by the National Oceanic and Atmospheric Administration (NOAA) and the State of Hawaii. The proposed action was first recommended by a private researcher in 1977 and was designated as a candidate for a marine sanctuary in December 1979. Since 1979, NOAA has sponsored several series of workshops and public information meetings (the most recent workshop series being April 1982), to study the feasibility and desirability of establishing the sanctuary.

An issue paper on the proposed sanctuary, prepared by NOAA, is available to the public. Please request copies from the Sanctuary Programs Office, Office of Coastal Zone Management (NOAA), 3300 Whitehaven Street, N.W., Washington 20235 (202/634-4236) or from the Hawaii State Department, P.O. Box 2359, Honolulu, Hawaii 96804.

voice in the consultation process and of streamlining the exemption system, but argued that the amendments did not go far enough.

The Colorado River Water Conservation District, in particular, strongly recommended extensive changes in the consultation provisions of the bill, charging that its provisions have been misused by the Fish and Wildlife Service to usurp traditional State water rights. In the case of a conflict between species conservation and project development, the District would give the Federal action agency, rather than the Service, "the authority to balance the interests involved and the ultimate decisional responsibility as to whether the benefits of the proposed conflict outweigh the costs to the species."

At least two of the industry representatives advocated further expediting the listing process in order to minimize uncertainty about potential impacts on their clients' activities, but several questioned the advisability of listing subspecies, populations, or so-called lower life forms.

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As the BULLETIN went to press, the full committee was scheduled to report the mark-up bill to the Senate by May 15. A similar draft bill is under consideration in the U.S. House of Representatives, where committee action also was scheduled by May 15.

Opportunity for International Wildlife Conservation

by David Ferguson

Part III in a series on the endangered species activities of the Service's International Affairs Office.

The Prime Minister of India sits enthralled as a film depicting a 1-year ecological saga of India's Bharatpur Sanctuary unfolds in front of her. A visiting Egyptian wildlife biologist listens intently as the Aransas National Wildlife Refuge Manager talks about endangered species management. Wildlife case histories are discussed between U.S. and Pakistani biologists at a conference in Peshawar within a few miles of the Khyber Pass. A common thread that connects all of these events is the Fish and Wildlife Service's Special Foreign Currency Program.

U.S. holdings of foreign currencies or credits accumulate through the sale of surplus agricultural commodities under the Agricultural Trade Development and Assistance Act of 1954 and through the repayment of loans. These monies, which cannot be converted into dollars or other currencies, are used to fund U.S. foreign aid programs in the host countries. A portion of the funds may be declared "excess" by the U.S. Treasury whenever the amount held is sufficient to meet all U.S. government requirements over a period of 2 years. These excess funds may then be applied to optional assistance programs.

Section 8(a) of the Endangered Species Act authorizes the Department of the Interior to utilize these foreign currencies for programs to conserve threatened and endangered species in those countries where such currencies are available. At present, the only countries eligible for the program are Burma, Guinea, India, and Pakistan.

As the primary U.S. agency with responsibility for endangered species, the Fish and Wildlife Service gained Congressional approval to utilize excess currencies starting in Fiscal Year 1976. At that time, Egypt also had excess currency status and the Service received approval for funding in Egypt, Pakistan, and India. Nearly 100 species within the three countries appear on the U.S. List of Endangered and Threatened Wildlife and Plants. Since the funds are "no-year monies" (not tied to a specific fiscal year), their use can be extended over time, which is fortunate since project negotiations can take up to 2 years and because flexibility in the use of these funds is helpful. In cases such as

that of Egypt, programs can be continued despite the unavailability of new funding.

The Service began by proposing projects devoted to the preservation of both endangered species and their ecosystems. Combined teams from the Fish and Wildlife Service and the National Park Service (which shares Endangered Species Act authorization) traveled to Egypt, India, and Pakistan in early 1977 and 1978 to contact their wildlife agencies. Cooperative programs were initiated, focusing on increasing wildlife/wildland management skills, restoration of habitats, and establishing programs for the recovery of endangered wildlife, including economically valuable species that might someday be safely harvested on a sustained-yield basis.

Activities are generally conducted at the request of the foreign country involved, and always with its full approval and participation. Activities fall into three broad categories: research, including status surveys; education, including both public awareness and professional training; and resource management. Egypt, India, and Pakistan are all different in their flora and fauna, as well as in their management methods, and while the Service's general approach to the programs in each country has been consistent, the make-up and structure of each program is quite different.

The overall program is coordinated in the Service's International Affairs Office, but the activities take place in the individual countries using local personnel. U.S. and international expertise, in the form of technical information and personnel, is drawn upon from time to time as situations merit. Universities, nongovernmental organizations, private foundations, State conservation departments, and Federal agencies other than the Service have willingly provided their expertise. Projects which could have direct benefits in the U.S. are among those sought out in the cooperating countries.

EGYPT

Many Egyptian animals, such as the Nile crocodile, cheetah, leopard, du-gong, and slender-horned gazelle, have been reduced to the verge of extinction by excessive hunting, commercial overexploitation, and habitat deterioration. In addition, other species, such as the ibex, wild ass, and Barbary sheep, have come under increasing stress. Management and protection of threatened and endangered species falls under the jurisdiction of the host country's national government; however, in spite of protective legislation, management is often divided among several agencies with the result that full effectiveness is not achieved.



The leopard is one of many species protected by the U.S. Endangered Species Act of 1973 which benefit from the Service's Special Foreign Currency Program.

Courtesy of World Wildlife Fund, Inc.

Wildlife management is only a newly developed and understood concept in Egypt, and has been seldom practiced. Service efforts in Egypt initially focused on research projects to collect, collate, and assess the existing information, and to make it readily available. Subsequent activities have sought to locate and evaluate the status of the remaining populations of endangered and threatened species.

In November 1978, the Service helped sponsor an international workshop in Cairo on wildlife management in arid ecosystems. Attended by representatives from 23 countries and 9 international wildlife organizations, the conference provided recommendations to guide the Egyptian government in the conservation field for the next 2 years. Updated checklists for Egyptian wildlife were published, and field surveys discovered species thought to have been extirpated within their Egyptian range. Transfers of biological information on the Sinai have been facilitated by the Service and by private conservation organizations in the U.S. Where necessary, it was translated from Hebrew to English, with all data being provided to the government of Egypt. Implementation plans also were formulated for Israeli-established wildlife reserves in Sinai.

The cooperative program includes habitat management and protective legislation. A ministerial level conservation council was established to ensure a conservation voice in development planning within Egypt, and a proposal was developed to establish an Egyptian Wildlife Service. To help implement these measures, a joint program for multi-level training and environmental education has been established for Egyptian conservation personnel and the development of public awareness. In another significant move, Egypt ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

PAKISTAN

Attempts at establishing a joint program with the government of Pakistan have often suffered from changes in U.S. foreign policy as well as the sometimes politically unstable conditions within Pakistan. Interest by the Pakistan wildlife officials remains high, but little in the way of real activities has occurred.

Pakistan has an unusually large concentration of endangered and threatened species, including at least 25 on the U.S. list. Although a national conservation plan exists for Pakistan, the economic development and social needs of that nation have taken precedence in its national budget. Fortunately, this has not kept the National Council

for Wildlife Conservation in Pakistan (that country's primary government agency for wildlife) from continuing research on natural areas and their wildlife. Parks and reserves have been established, but some exist only on paper, awaiting funding for staff and developmental costs.

A fairly comprehensive program for research, management, and training was presented to the government of Pakistan but never formally instituted. Nevertheless, communication continues in the hope that political conditions will eventually stabilize enough to allow joint work. In the meantime, a number of exchanges have taken place in the form of personnel and technical information transfers. The Service provided support for an international survey project on the houbara bustard and is supporting educational efforts to raise awareness of both this bird and the critically endangered Siberian crane. Training continues to be emphasized.

INDIA

India has a rich heritage of wildlife, as well as a long history and tradition of conservation. The floral and faunal diversity of the Indian subcontinent is overwhelming, with estimates of 21,000 species of plants, 500 mammals, 1,300 birds, over 20,000 insects, and a wide

variety of other life forms. With an expanding human population of around 700 million, it is a tribute to the foresight of India's leaders that the government gives any support at all for wildlife conservation.

Wildlife legislation and administering agencies are in place, and there is a general public awareness and appreciation for wildlife. Systematic ecological data are not widely available, however, and protected areas are not subject to the most modern techniques for conservation and management. Unfortunately, the knowledge of population dynamics of most species is fragmentary. Many of the Indian states, where the authority for wildlife management is vested, suffer from a lack of technical expertise and trained personnel.

Next to the U.S., India probably has more species (51) on the U.S. list than any other country. The Service's joint program has sought to assist the government of India in implementing its wildlife objectives as well as to identify areas of cooperation that would benefit U.S. conservation programs.

Four major 5-year projects are currently underway to gather research on listed species and their habitats. A national survey of threatened and endangered plants incorporates management for future utilization of medicinally or economically valuable species through sustained yield, and a similar survey is



Photo by David Ferguson

The Sariska Sanctuary in Rajasthan, India, was established to conserve this dry forest habitat.

being conducted for avifauna. India contains wintering grounds for much of Asia's bird life, including a number of listed species, the most spectacular of which may be the Siberian crane. A third major project focuses on two other endangered species: the Asian elephant and the great Indian bustard.

While new protected areas may be established as a result of this extensive activity, one major project is designed to assess the effectiveness of an existing sanctuary for the conservation of an endangered species; in this case, again, the Siberian crane. Hydrobiological studies, coupled with management improvements at Keoladeo National Park, a relatively small wetland with international significance for migratory waterfowl, will enhance wintering habitat. It is the only known wintering grounds for the western population of the Siberian crane, which numbers fewer than 50 (a second population of fewer than 250 birds winters in China). The Keoladeo sanctuary depends upon monsoon rains and runoff funneled into the area by canals. It is a haven for a variety of waterfowl, as well as several species of mammals and reptiles, and provides grazing for thousands of domestic cattle. Management of the park to provide habitat for many wildlife species often comes in conflict with human uses of the land, and this is the major problem to be resolved. The joint U.S./India project seeks to gather basic biological data about the park, assess utilization factors, and provide data to decision-makers for building a management program. The results are expected to have significant applications in the U.S.

Training of Indian personnel is a major focus of activity. Indian scientists have visited research institutions in the U.S. (as well as other countries) to exchange information, and to learn state-of-the-art techniques and applications. Biologists from the U.S. and England have visited specific sites and project areas to assist in surveys, planning, and exchanges of technical information.

Recently, the Service sponsored a major workshop on Wildlife Management and Research Techniques in India. Carried out in conjunction with the government of India's Ministry of Agriculture, the 3-week workshop provided training in 15 subject areas to over 60 participants (6 came from the neighboring countries of Bhutan, Pakistan, Nepal, Sri Lanka and Indonesia). Other cooperative exchanges of scientists and technical information have included visits of U.S. and English scientists to India to assist in activities involving environmental education, wetland ecology, fauna and flora surveys, wildlife legislation, zoo operation, reptile trade, wildlife diseases, and animal tracking and immobilization.

Significant effort has been put into helping the government of India develop a national educational plan. A pilot workshop for instructing teachers in conservation teaching techniques was successfully carried out in India with the help of the National Park Service (U.S.), and a nongovernmental Indian agency was assisted in developing a series of wildlife conservation educational packets. A 50-minute film documentary on the Keoladeo National Park was supported, and multiple copies (including six in the Hindi language) were provided to the government of India. This film has been favorably received in a number of countries outside India. Wildlife posters in several Indian languages were widely distributed to advance the conservation message, and material on critical marine habitats of the Northern Indian Ocean (Sri Lanka, India, Pakistan) has also been printed.

THE FUTURE

While Service activities in Egypt are winding down, the program in Pakistan is continuing at a steady pace, and action in India is still climbing. Service efforts in the future will attempt to

strengthen India's wildlife expertise with the expectation that it can become a regional leader in wildlife conservation. Carryover funds from previous years will allow the Service to continue its support of activities in Egypt, albeit at a low level, for the next year or so.

Based on our mandate under the Endangered Species Act, the Service has developed joint programs in Egypt, Pakistan and India with the full realization that excess foreign currencies will someday not be available. (This has already happened with Egypt). The Service has, by and large, sought out existing programs in other countries rather than creating new ones that would end once U.S. assistance is removed. We have also enlisted the cooperation of other U.S. and international wildlife organizations and institutions, upon which we rely quite heavily. A network of cooperative agencies provides insurance that international conservation work will continue. The wealth and quality of U.S. expertise is well recognized abroad, and is increasingly being sought by wildlife agencies in the "excess foreign currency" countries, reinforcing the importance of the Fish and Wildlife Service in international wildlife conservation.

CONDOR PAIR LOSES AGAIN

The pair of California condors (*Gymnogyps californianus*) that accidentally destroyed their egg in late February laid a second egg in early April, but invading ravens made this second attempt at producing a chick another failure.

Biologists with the Condor Research Center first saw the second egg on April 8, when the female rolled it out of a dark corner in the nest cave into the view of an observation post ½-mile away. The egg was thought to have been laid the previous day, judging from the female's behavior, in a cave about 100 yards from where the pair produced their first egg. Both sites are in a remote mountainous region northeast of Ventura, California.

On April 29, the female condor approached the nest to take its turn incubating the egg, but was chased away by the male. A raven (*Corvus corax*) quickly took advantage of the opportunity to enter the nest cave and began to peck at the egg, apparently puncturing it. The returning female condor at first tried to incubate the damaged egg, but it was soon clear that the egg was crushed. On the following day, a pair of ravens again approached the nest site and, in the ensuing fight, managed to drag away part of the eggshell.

The condor pair's first egg, laid on February 14, was lost over the edge of a cliff 12 days later as the birds fought

over which would incubate it (see March 1982 BULLETIN). They are thought to be the same pair that successfully fledged a chick 2 years ago after similar disputes.

Despite the double tragedy, there are new grounds for optimism about the future. "This is the best evidence yet that the critically Endangered California condor will renest after a nesting failure early in the breeding season," said Dr. Noel Snyder, co-leader of the center. Relaying after an early egg loss has long been known for captive Andean condors (*Vultur gryphus*), but whether it might be true for the California species had not been fully confirmed until now. This proof of natural double clutching is important to the upcoming captive breeding program for the California condor. Further weight has also been given to the belief that a captive population could be established by taking wild eggs for artificial incubation without significantly affecting the wild population. Captive reproduction of Andean condors was multiplied several times the natural rate at the Patuxent Wildlife Research Center in Maryland. Researchers hope to duplicate this success with the California species at the San Diego Wild Animal Park and the Los Angeles Zoo when free-flying immatures are captured under a permit issued recently.

New Publications

The initial section of an *Atlas of the Rare Vascular Plants of Ontario* (edited by George W. Argus and David J. White) has been produced in both English and French by the Botany Division, National Museum of Natural Sciences, Ottawa, Ontario, K1A 0M8. Copies may be obtained free-of-charge by writing the museum's Rare and Endangered Plants Project. Those who request this first part will automatically be put on a mailing list to receive subsequent parts as they are published.

Threatened and Endangered Vascular Plants of Oregon: An Illustrated Guide is now available from the Service's Portland Endangered Species Office.

CITES PLANTS REVIEWED

Continued from page 5

A review of Mexican cacti, conducted with the Mexican Cactus Society and the MDAHR has prompted the Service to propose the transfer of 47 taxa of native Mexican cacti to Appendix I. Current information suggests that all other taxa of native North American cacti should remain on Appendix II in order to prevent commercial overexploitation through international trade and to enable such trade to be monitored.

A similar review of native orchids of U.S. and Canada, conducted in conjunction with the CWS, has indicated that these taxa should remain on Appendix II. The opinion of both the Service and CWS is that none of the native North American orchids (north of Mexico) is potentially threatened with extinction as a direct result of trade. However, available information is inadequate

to support their delisting under the criteria adopted by the CITES Parties at Berne in 1976. Please consult the April 2, 1982, *Federal Register* for a complete listing of proposals.

The Service plans to publish a further notice in September 1982 announcing its decisions on these plant proposals, prior to submitting them to the CITES Secretariat for consideration at the next CITES conference, which is expected to occur around April 1983. Correspondence concerning this notice should be sent to the Office of the Scientific Authority, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (202/653-5948).

BOX SCORE OF SPECIES LISTINGS

| Category | ENDANGERED | | | THREATENED | | | SPECIES TOTAL |
|--------------|------------|----------------|--------------|------------|----------------|--------------|---------------|
| | U.S. Only | U.S. & Foreign | Foreign Only | U.S. Only | U.S. & Foreign | Foreign Only | |
| Mammals | 15 | 17 | 224 | 3 | 0 | 22 | 281 |
| Birds | 52 | 14 | 144 | 3 | 0 | 0 | 213 |
| Reptiles | 7 | 6 | 55 | 8 | 4 | 0 | 80 |
| Amphibians | 5 | 0 | 8 | 3 | 0 | 0 | 16 |
| Fishes | 28 | 4 | 11 | 12 | 0 | 0 | 55 |
| Snails | 3 | 0 | 1 | 5 | 0 | 0 | 9 |
| Clams | 23 | 0 | 2 | 0 | 0 | 0 | 25 |
| Crustaceans | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Insects | 7 | 0 | 0 | 4 | 2 | 0 | 13 |
| Plants | 52 | 2 | 0 | 7 | 1 | 2 | 64 |
| TOTAL | 194 | 43 | 445 | 45 | 7 | 24 | 758 |

*Separate populations of species, listed both as Endangered and Threatened, are tallied twice. Species which are thus accounted for are the leopard, gray wolf, bald eagle, American alligator, green sea turtle, and Olive ridley sea turtle.

Number of species currently proposed: 10 animals
8 plants

Number of Critical Habitats Listed: 50

Number of Recovery Teams appointed: 69

Number of Recovery Plans approved: 53

Number of Cooperative Agreements signed with States:
38 fish & wildlife
11 plants

May 6, 1982

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If you are receiving a duplicate copy of the BULLETIN, or if your office continues to receive copies addressed to individuals no longer employed by your agency, please let us know so that we can eliminate these entries from our mailing list. Please refer to the zip code as well as to the addressee when you call or write regarding changes in the mailing list. Thank you.

—The Editor

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ENDANGERED SPECIES

Technical Bulletin

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POSTAGE AND FEES PAID
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